

## PROJECT DESCRIPTION

## EQUIPMENT LIST (CONT.)

## I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal with interconnect at the intersection of MD 528 and 100th Street in Ocean City, Worcester County. The existing span wire signal shall be replaced with a new mast arm signal. Video detection shall be used for all approaches. MD 528 is assumed to run a north-south direction.

## II. INTERSECTION OPERATION

- The intersection shall continue to operate in a NEMA six-phase, semi-actuated mode, with the MD 528 approaches running concurrently. The Exclusive/Permissive left turn phases shall be maintained for both approaches of MD 528. The pedestrian phase with pushbutton actuation across the south leg of MD 528 shall remain in operation. A new pedestrian phase with pushbutton actuation across the north leg of MD 528 shall be provided. The 100th Street approaches shall also continue to run concurrently.
- A full-traffic-actuated, eight-phase master/local controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

## III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop. Contact Mr. Ed Rodenhizer (Dave Swartz) at (410) 787-7650 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- The sprinkler system cabinet shall be rewired by others. The contractor shall contact Ocean City's Recreation and Parks.
- Upon completion of this project, the Contractor shall notify Mr. Robert Snyder at (410) 787-7631 to arrange for the phone line installation. The Contractor is to provide Mr. Robert Snyder with the nearest street address, zip code and phone number.

## EQUIPMENT LIST

## A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9044	Controller cabinet, size "6"	1 EA
9045	Controller master ASC 2M with telemetry.	1 EA
9086	Video detection interface equipment: 1-4 cameras (to be installed by signal shop).	1 EA
9571	Sheet aluminum signs to consist of: (most arm or pole mount)	57 SF
	D3-2 "100 TH Street" sign, (variable x 16") (dual faced).	2 EA
	R3-5R "RIGHT TURN ONLY" sign, (30" x 36")	1 EA
	R3-14 MOD "RIGHT LANE/ BUSES AND RIGHT TURNS ONLY" sign, (30"x36").	2 EA
	R10-12 "LEFT TURN YIELD ON GREEN (BALL)" sign, (36" x 42").	2 EA

## B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	3 EA
2001	Class 2 Excavation.	5 C.Y.
2002	Test Pit Excavation	5 C.Y.
5005	12" white heat applied permanent preformed thermoplastic pavement marking.	975 L.F.
6001	Furnish and install depressed curb and gutter.	80 L.F.
6002	Standard type A combination curb and gutter 12" gutter pan 8" depth.	30 L.F.
6004	4" concrete sidewalk.	500 S.F.
8001	Furnish and install concrete for signal foundation.	15 C.Y.
8008	Pre-manufactured camera to controller (200' length) cable	2 EA
8009	Pre-manufactured camera to controller (300' length) cable	1 EA

## EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

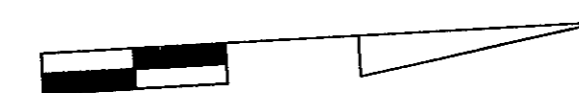
ITEM NO.	DESCRIPTION	QUANTITY
8010	Pre-manufactured camera to controller (400' length) cable	1 EA
8014	Furnish and install 21' pole w/ special 15' "T" 50' mast arm.	1 EA
8014	Furnish and install 16' pole w/ special 15' "T" 38' mast arm.	1 EA
8014	Furnish and install 21' pole w/ special 15' "T" 38' mast arm.	1 EA
8015	Furnish and install 21' pole w/ special 15' "T" 60' mast arm.	1 EA
8020	Furnish and install breakaway pedestal pole (10').	2 EA
8021	Remove and dispose of existing material and equipment per assignment.	1 EA
8027	Disconnect, pull back and reroute cable.	560 L.F.
8029	Detectable warning system (truncated domes).	32 SF
8033	Furnish and install No. 6 AWG stranded bare copper ground wire.	880 L.F.
8037	Furnish and install 3" weatherhead.	2 EA
8040	Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenched.	25 L.F.
8041	Furnish and install 3" schedule 80 rigid polyvinyl chloride - trenched.	45 L.F.
8042	Furnish and install 4" schedule 80 rigid polyvinyl chloride - trenched.	60 L.F.
8044	Furnish and install 4" schedule 80 rigid polyvinyl chloride - slotted.	185 L.F.
8047	Furnish and install electrical utility service equipment (120/240 V, 1 phase 3 wire system).	1 EA
8048	Furnish and install electrical cable 1-conductor No. 4 AWG THHN/THWN.	50 L.F.
8054	Furnish and install electrical handhole.	3 EA
8057	Install overhead sign.	57 S.F.
8058	Furnish and install video detector camera.	4 EA
8069	Furnish and install 12-pair communication cable, self-supporting (overhead).	1500 L.F.
8076	Furnish and install ground rod - 3/4" x 10'.	7 EA
8077	Furnish and install 8" vehicular traffic signal head section.	12 EA
8078	Furnish and install 12" vehicular traffic signal head section.	32 EA
8084	Furnish and install electrical cable - 2 conductor (No. 14 AWG).	530 L.F.
8086	Furnish and install electrical cable - 5 conductor (No. 14 AWG).	705 L.F.
8087	Furnish and install electrical cable - 7 conductor (No. 14 AWG).	1585 L.F.
8088	Furnish and install tray cable - 2 conductor (No. 12 AWG).	105 L.F.
8091	Pedestrian pushbutton and R10-4(1) sign. (Note: Sign to read "PUSHBUTTON TO CROSS MD 528".)	4 EA
8097	Install controller and cabinet base mount.	1 EA
8099A	Furnish and install 16" LED countdown pedestrian signal head.	4 EA
Neg.	Relocate landscape timbers.	lump sum

## C. EQUIPMENT TO BE REMOVED

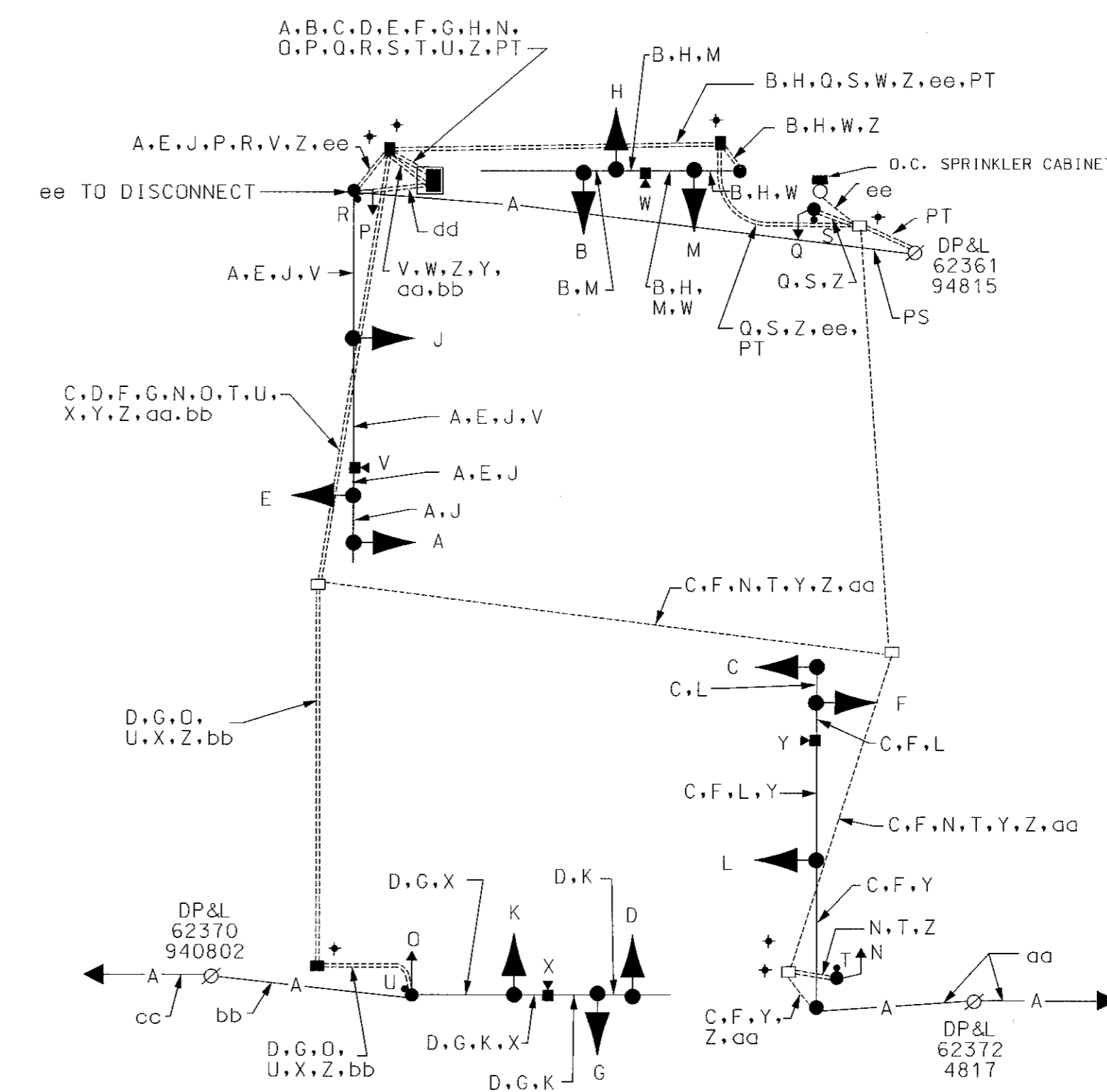
SHA Forces shall remove the controller and all auxiliary equipment from the controller cabinet. The cabinet and all other removed signal materials are to become property of the contractor.

## PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 & 5	←G→R	←G→R	R	←G→R	←G→R	R	R	R	R	R	R	R	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																
PHASE 1 & 6	←G→G	←G→G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 & 6 CHANGE	←Y→G	←Y→G	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 5	R	R	R	←G→G	←G→G	G	R	R	R	R	R	R	DW	DW	DW	DW
2 & 5 CHANGE	R	R	R	←Y→G	←Y→G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	G	G	G	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK



## WIRING DIAGRAM



WIRING KEY	
A	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
J	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
R	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
V	PRE-MANUFACTURED CAMERA TO CONTROLLER CABLE (200')
X	PRE-MANUFACTURED CAMERA TO CONTROLLER CABLE (300')
Y	PRE-MANUFACTURED CAMERA TO CONTROLLER CABLE (400')
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
aa	12-PAIR VOICE GRADE INTERCONNECT CABLE (OVERHEAD)
bb	RE-ROUTED 12-PAIR VOICE GRADE INTERCONNECT CABLE
cc	EXISTING 12-PAIR VOICE GRADE INTERCONNECT CABLE
dd	3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG)
ee	2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)
PT	PROPOSED TELEPHONE DROP
PS	PROPOSED SERVICE TO BE INSTALLED BY CONECTIV
+	GROUND ROD



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION  
Office of Traffic & Safety  
TRAFFIC ENGINEERING DESIGN DIVISION

MD 528 @ 100th St  
GENERAL INFORMATION SHEET

DRAWN BY: RC	F.A.P. NO. S.H.A. NO.	AT3555185	TS NO. 1269-61	SHEET NO. 2 OF 2
CHECKED BY: RRZ	COUNTY: Worcester	23052802.73	T.I.M.S. NO. 6399	
SCALE: NONE	LOG MILE:			
DATE: 11/4/04				

